

CLAIMS

1. An image processing apparatus comprising:
 - a plurality of code converting units for executing coding and decoding of image data;
- 5 a plurality of request-source task units for requesting any of said plurality of code converting units to perform a code conversion of image data, the number of task units being greater than the number of code converting units and having priorities thereof set in advance; and
 - an assigning unit for assigning said plurality of code converting units to processing requests from request-source task units having a high priority and, if there is an idle code converting unit among the
- 15 plurality of code converting units, assigning the code converting unit to a processing request from a request-source task unit having a low priority.
2. The apparatus according to claim 1, wherein said code converting units have one-to-one correspondence to the request-source task units having the high priority; and
 - said assigning unit assigns the corresponding code processing units in accordance with the processing requests from the request-source task units
- 25 having the high priority.
3. The apparatus according to claim 1 or 2, wherein code converting units, the number of which is smaller

than the number of the request-source task units having the low priority, correspond to these request-source task units having the low priority; and

5 said assigning unit assigns said code converting units in a prescribed order to the processing requests from the request-source task units having the low priority.

4. The apparatus according to claim 3, wherein said code converting units are constituted by software-
10 implemented code converting units for executing code conversion by software and hardware-implemented code converting units for executing code conversion by hardware; and

15 said assigning unit assigns said software-implemented code converting units to the processing requests of the request-source task units.

5. The apparatus according to claim 4, wherein said request-source task units having the high priority are classified into a first unit group processed by said
20 software-implemented code converters and a second unit group processed by said hardware-implemented code converting units via said software-implemented code converters; and

25 said assigning unit assigns said software-implemented code converters in accordance with the priorities and classification of said request-source task units.

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6. The apparatus according to claim 5, wherein said hardware-implemented code converting units are adapted so as to be used jointly by the request-source task units of said second unit group.
- 5 7. An image processing method comprising:
 - a processing-request issuing step of issuing a processing request to a code converting unit by any request-source task unit of a plurality of request-source task units the number of which is greater than 10 the number of a plurality of code converting units and having priorities thereof set in advance, said code converting units executing coding and decoding of image data;
 - a priority processing determination step of 15 receiving the processing request and determining whether the processing request issued by the request-source task unit should be processed with priority; and
 - an assigning step of assigning the code 20 converting units to processing requests from request-source task units determined to have a high priority and, if there is an idle code processing unit among the code converting units, assigning the code processing unit to a processing request from a 25 request-source task unit determined to have a low priority.
8. The method according to claim 7, wherein said code

converting units have one-to-one correspondence to the request-source task units having the high priority; and

5 said assigning step assigns the corresponding code processing units in accordance with the processing requests from the request-source task units having the high priority.

9. The method according to claim 7 or 8, wherein code converting units, the number of which is smaller than 10 the number of the request-source task units having the low priority, correspond to these request-source task units having the low priority; and

15 said assigning step assigns said code converting units in a prescribed order to the processing requests from the request-source task units having the low priority.

10. The method according to claim 9, wherein said code converting units are constituted by software-implemented code converting units for executing code conversion by 20 software and hardware-implemented code converting units for executing code conversion by hardware; and

25 said assigning step assigns said software-implemented code converting units to the processing requests of the request-source task units.

11. The method according to claim 10, wherein said request-source task units having the high priority are

- classified into a first unit group processed by said software-implemented code converters and a second unit group processed by said hardware-implemented code converting units via said software-implemented code
- 5 converters; and
- said assigning step assigns said software-implemented code converters in accordance with the priorities and classification of said request-source task units.
- 10 12. The method according to claim 11, wherein said hardware-implemented code converting units are adapted so as to be used jointly by the request-source task units of said second unit group.
13. An image processing program comprising:
- 15 program code for executing a processing-request issuing step of issuing a processing request to a code converting unit by any request-source task unit of a plurality of request-source task units the number of which is greater than the number of a plurality of
- 20 code converting units and having priorities thereof set in advance, said code converting units executing coding and decoding of image data;
- program code for executing a priority processing determination step of receiving the processing request and determining whether the processing request issued by the request-source task unit should be processed with priority; and

program code for executing an assigning step of
assigning the code converting units to processing
requests from request-source task units determined to
have a high priority and, if there is an idle code
5 processing unit among the code converting units,
assigning the code processing unit to a processing
request from a request-source task unit determined to
have a low priority.

14. The program according to claim 13, wherein said
10 code converting units have one-to-one correspondence
to the request-source task units having the high
priority; and

the program code for executing said assigning
step includes code for assigning the corresponding
15 code processing units in accordance with the
processing requests from the request-source task units
having the high priority.

15. The program according to claim 7 or 8, wherein
code converting units, the number of which is smaller
20 than the number of the request-source task units
having the low priority, correspond to these request-
source task units having the low priority; and

the program code for executing said assigning
step includes code for assigning said code converting
25 units in a prescribed order to the processing requests
from the request-source task units having the low
priority.

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16. The program according to claim 15, wherein said code converting units are constituted by software-implemented code converting units for executing code conversion by software and hardware-implemented code 5 converting units for executing code conversion by hardware; and

the program code for executing said assigning step includes code for assigning said software-implemented code converting units to the processing 10 requests of the request-source task units.

17. The program according to claim 16, wherein said request-source task units having the high priority are classified into a first unit group processed by said software-implemented code converters and a second unit 15 group processed by said hardware-implemented code converting units via said software-implemented code converters; and

the program code for executing said assigning step includes code for assigning said software-implemented code converters in accordance with the 20 priorities and classification of said request-source task units.